

This listing of claims will replace all prior versions and listings of claims in this application:

## Listing of Claims

1. (Currently amended) An optical system production line, comprising  
an optical bench supply that provides optical benches;  
a component supply that provides mounting structures holding optical  
components;  
a pick-and-place machine that receives optical benches from the bench supply,  
picks optical components from the optical component supply, and solder  
bonds the mounting structures, holding the optical components, to the  
optical benches; and  
optical system aligner that characterizes the positions of the optical  
components held by the mounting structures, which have been solder  
bonded to the optical benches by the pick-and-place machine, and  
mechanically adjusts the relative positions of the optical components by  
plastically deforming the mounting structures, which have been bonded to  
the optical benches by the pick-and-place machine.
2. (Cancelled)
3. (Currently amended) An optical system production line as claimed in claim 1,  
wherein the optical system aligner characterizes the positions of the optical  
components by activating optical links of optical systems on the benches,  
detecting optical signals after interaction with at least some of the optical  
components[.], and ~~adjusting~~ adjusts the optical components to optimize  
transmission of optical signals over the links.
4. (Previously presented) An optical system production line as claimed in claim  
1, wherein the optical system aligner energizes active components of optical  
systems on the benches and adjusts the optical components, which have been

bonded to the optical benches by the pick-and-place machine, to optimize optical signal transmission through the systems from the active optical components.

5. (Previously presented) An optical system production line as claimed in claim 1, wherein the optical system aligner energizes active components of optical systems and adjusts positions of at least one passive optical component, which have been bonded to the optical benches by the pick-and-place machine, in each of the optical systems to optimize optical signal transmission from the active components to the at least one passive component.

6. (Previously presented) An optical system production line as claimed in claim 1, wherein the optical system aligner energizes active components of optical systems and adjusts positions of at least two passive optical components, which have been bonded to the optical benches by the pick-and-place machine, in each of the optical systems to optimize optical signal transmission between the passive components.

7. (Original) An optical system production line as claimed in claim 1, wherein the pick and place machine is a flip-chip bonder.

8. (Currently amended) An optical system production line as claimed in claim 1, wherein the optical system aligner comprises two jaws for engaging ~~a~~ the mounting ~~structure~~ structures, which has been bonded to the optical benches by the pick-and-place machine, supporting the optical component and moving the ~~structure~~ structures relative to the bench.

Claims 9-16. (Cancelled)

17. (Currently amended) An optical system production line, comprising  
an optical bench supply for providing optical benches;  
a component supply for providing mounting structures holding optical components;

a pick-and-place machine for receiving optical benches from the bench supply, and for picking optical components from the optical component supply, and for solder bonding mounting structures of the optical components to the optical benches; and

means for characterizing the positions of the optical components held by the mounting structures, which ~~that~~ have been solder bonded to the optical benches by the pick-and-place machine, and for mechanically adjusting the relative positions of the optical components by plastically deforming the mounting structures that have been bonded to the benches by the pick-and-place machine.

18. (Cancelled)

19. (Previously presented) An optical system production line as claimed in claim 17, further comprising the characterizing and adjusting means characterizing the positions of the optical components by activating optical links of optical systems on the benches, detecting optical signals after interaction with at least some of the optical components, and adjusting the optical components, which have been bonded to the optical benches by the pick-and-place machine, to optimize transmission of optical signals over the links.

20. (Currently amended) An optical system production line as claimed in claim 17, further comprising the characterizing and adjusting means energizing active components of optical systems and adjusting positions of at least one passive optical component, which has been bonded to the optical benches via a mounting structure by the pick-and-place machine, in each of the optical systems to optimize optical signal transmission from the active components to the at least one passive component.